

DIGITIZING

Photogrammetry — Graphics
Layout — Drafting
Tape Preparation

POSITIONING

Plotting — Drawings, Graphs
Numerical Control — Drilling, Contouring

PHOTO SENSING

Automatic Line Tracing
Automatic Edge Location
Automatic Inspection



DATA TECHnology, inc.

COORDINATE DIGITIZER The Coordinate Digitizer is a precision measuring instrument which provides a means for rapidly digitizing x and y coordinates to 0.001" by moving a crosshair reticle to selected points of interest. Readily adaptable to image plane or direct graphic digitizing, the unit presents both numerical display and coded electrical output of crosshair position. Position indication is maintained by means of Data Tech's INCROSYN Incremental Encoders and BI-Directional Counters. The encoders are rotated by means of a precision rack and pinion in each axis and generate 1,000 pulses per turn which serve to increment the counters up or down correspondingly. Semi-absolute reorientation is provided by means of reference pulses, produced during each inch of travel. A variety of interface options are available, including relay buffer for punch or printer output.

DIGITAL PLOTTER Designed for use as a tape-controlled positioning system, the plotter may serve in a wide variety of applications from scribing and punching to verification and display—for templates, drawings, etc. A basic "drafting machine" configuration is used: an arm moves in parallel fashion along the length of the table; and, a mounting plate moves along the arm by means of a servo controlled precision rack and pinion. Readout and position control to a resolution of 0.001" are provided by paired INCROSYN and BI-DIRECTIONAL Counter in each axis. Designed for Teletype programming and control, a variety of interface options are available.

N/C TABLE Designed for heavier duty use, Data Tech's Numerically Controlled Layout Table provides an easily programmed positioning system adaptable to a variety of high precision applications, including printed circuit board and template drilling, contouring, automatic wiring, inspection, and component assembly. As a portable 2-axis table positioner, it may be used to automate existing machines. Precision ball screw drives allow rapid positioning to 0.001" using paired INCROSYN and BI-Directional Counter for readout and position control in each axis. Intended for teletype or magnetic tape programming and control, a number of options are readily available for interface purposes.

QUESTIONNAIRE

Please let us know if we may be of further service to you via this card.

Thank you.

☐ Please contact me immediately.
My application (or requirement) involves

Please send information regarding:

☐ Shaft Encoders: absolute, incremental, resolution,
☐ Counters:, decades,, resolution,, -axis readout.

Other characteristics,
☐ Coordinate Digitizer: size, x....., resolution,

Layout Tables: positioning, programming,

☐ Digital Servo for,
Digital Interface: from, to

☐ Voltage Digitizers: resolution, range,

☐ Rotary Transformers: signal, power

My request is for current application, general information,

Please add, my name to the mailing list (or remove),).

Name, Title

Company

Address

City, State, Zip Code

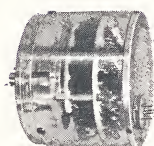
Telephone, Ext., TWX:

INTEGRATED SYSTEM COMPONENTS Shaft Encoders • A/D-D/A Converters • Rotary Transformers Digital Counters, Readouts, Controls, Servos



VERNISYN is a high precision, magnetic, non-contact shaft encoder. Full-scale vernier and complete-perimeter pickoff averaging provide an extremely high resolution and accuracy-to-size ratio. Available in various absolute (or incremental) models, the VERNISYN technique offers high reliability and long life in a sturdy, compact servo-type package. Basic transducer output is in serial sample form, but readout, which may track continuously, may be in parallel binary or BCD format, or as required.

MODEL	CASE DIA. (INCHES)	RANGE OF RESOLUTION		
		BINARY	SECONDS	DEGREES
VC 8	.75"	2 ¹⁵	45"	.05°
VC 11	1.05"	2 ¹⁵	20"	.02°
VC 15	1.50"	2 ¹⁷	20"	.01°
VC 25	2.50"	2 ¹⁹	5"	.002°
VC 35	3.50"	2 ¹⁹	1.25"	.0005°
VC 50	5.00"	2 ²¹	1.0"	.00025°



INCROSYN non-contact, incremental shaft encoders, especially designed for digital control and readout. Their wide range of resolution allows direct conversion of shaft position to final readout format. The high-signal, magnetic pickoff technique and integral silicon circuits used in the INCROSYN guarantee low noise susceptibility, high reliability, long life and low power, while eliminating such typical encoder problems as brush wear, lamp burnout and instability.

MODEL	CASE DIA. (INCHES)	RANGE OF RESOLUTIONS FOR RESOLUTIONS DIVISIBLE BY				MID-RANGE PRICE INCLUDING BIDIRECTIONAL ELECTRONICS
		8	4	2	1	
IC 11	1.06"	1200	600	300	150	
IC 15	1.50"	2048	1024	512	256	\$495
IC 25	2.50"	4096	2048	1024	512	\$595
IC 45	4.50"	8192	4096	2048	1024	\$795



ROTSYN, a compact, absolute magnetic non-contact shaft position encoder, provides a serial pulse train output wherein the total count of pulses in each burst directly corresponds to the shaft position. Thus each pulse represents 1/n th of a circle. The serial pulse output lends itself to direct digital recording or transmission, and the sampled answer may be indicated in a simple gated counter. A dual shaft version will provide velocity and absolute direction information as applied, for example, to wind and water digitizing. The ROTSYN features high reliability, long life, low noise susceptibility, and low power requirements.

MODEL	CASE DIA. (INCHES)	RANGE OF RESOLUTION	
		BINARY	DEGREES
S 8	.75"	2 ⁷	3°
S 11	1.06"	2 ⁸	1.5°
S 15	1.50"	2 ⁹	1°
S 25	2.50"	2 ¹⁰	1/2°
S 35	3.50"	2 ¹⁰	0.25°
S 50	5.00"	2 ¹¹	0.2°



ROTOTRAN is a rotatable inductive coupling device (a rotary transformer) used to transfer electrical signals or power from the rotating to the stationary member of an assembly without sliding contact as necessary for slip-rings. As a result ROTOTRAN offers important advantages where long life, high reliability, high speed, adverse environment, low torque, noise or crosstalk are primary considerations.

TYPICAL MODELS	SIZE	FREQUENCY RANGE	MAX. SIGNAL VOLTAGE
RS 8-107/1 5MC	Size 8	5MC-10MC ±3 db	100V @500KC
RS 8-106/2 500KC	Size 8	100KC-1.3MC ±3 db	25V @100KC
RS 15-105/1 100KC	Size 15	2KC-200KC ±3 db	5V @2KC
RS 15-102/1 400 cps	Size 15	300-500 cps	120V @400 cps
RP 35-100/1 400 cps	Size 35	350-450 cps	110V @400 cps



BI-DIRECTIONAL COUNTER, using modular, all-silicon plug-in circuit cards, originally developed as an INCROSYN readout, combines optimum economy, flexibility, reliability and performance. The basic 50 KC counter which provides in-line numerical display, zero reset and 12V supply, is adequate for most readout needs. Options include 500 KC count rate, preset reset, preset output gates, BCD or 10-line output per decade, time base, and many others. Standard counters are available in 3 to 7 decade models, in either self-contained cabinet or rack-mounting configurations.

CODE	OPTION	FEATURES	PRICE (ADD FOR OPTIONS)
CP (R) 53	Basic unit	Display & Reset	\$200 + \$125/decade
B	High Speed	500 KC	\$100
C or H	Preset Reset or Output	Thumbwheel Switches	\$25 + \$35/decade
D	± Indication	Count up from 0	\$140
E	10-line Output	10-lines/decade	\$30 + \$40/decade
G	4-line Output	BCD or 1224/decade	\$40 + \$30/decade

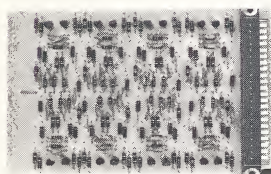
Models CP and CPR103 to 107
3 to 7 decades



VOLTAGE DIGITIZERS provide continuous comparison and consequent tracking of input voltage by the digital output. An up-down counter serves as the output buffer and also feeds a D/A converter through digital switches. The resultant voltage is compared with the input voltage to produce positive or negative error, or coincidence signals for up-down correction of the output register. The System will track at rates up to 200 KC bits/second with less than 1-bit deviation, and (optionally) an output buffer will hold the A/D answer at the time of strobe for digital presentation to external equipment.

MODEL	INPUT X1, X10, X100	DISPLAY	ACCURACY	PRICE
AD53-103	± 1 volt	± 999	1 mv	\$2975
104	± 1 volt	± 9999	100 μv	\$3975
211	± 1.024 volt	± 10 bits	1 mv	\$2975
212	± 1.024 volt	± 11 bits	500 μv	\$3575
214	± 1.024 volt	± 13 bits	125 μv	\$3975
215	± 1.024 volt	± 14 bits	62 1/2 μv	\$4975

DIALAVOLT, a precision voltage reference source, — high stability Zener and precision 10-turn Pot for coarse and fine adjust yield three decades continuous 10 and 100 volt ranges, \$95 for 1.0% or \$195.00 for 0.1% accuracy.



LOGIC CIRCUIT CARDS are all-silicon, plug-in digital circuits, designed for operation within a temperature range from -5°C to +55°C. Power dissipation is well within specified maximums, assuring long life and high reliability. The low logic level is 0 volts with noise signal rejection below +1 volt. The circuits function at a high logic level of +5 to +12 volts. Three series are available: DC to 100 KC, 500 KC and one megacycle. A full range of circuit functions (flip-flop, inverter, gate, power supply, etc.) are included within each series, allowing rapid construction of logic systems. Standard racks also provided.

TYPICAL 100 KC CARD NO.	DESCRIPTION	PRICE
CC 100	50 KC Bidirectional Counter decade	\$100
FF 100	2 Flip-flop	\$ 27
GC 100	6 x 2 gates 1 1/2 decade 1248	\$ 34
GC 102	Biqui to 10 line converter	\$ 45
GC 103	Preset Output Card	\$ 48
SR 100	8 bit parallel input Shift Reg.	\$ 98
RD 100	5 DP Relay & Driver 1/2 decade output	\$ 66
PS 200	±12V 500 ma Power Supply	\$ 59

over 100 card types available*

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